

Safety Valves

Type 06388

HEROSE



Cryogenic Safety Valves, angle type, bronze, PN50, type tested TÜV-SV. 780. S/G

Full lift safety valve, orifice $d_0=23\text{mm}$ standard safety valve,
with carbon filled PTFE valve seal, closed bonnet
“ cleaned and degreased for oxygen service ”

Part No. 06388.X.0000

Inlet: male thread type G (BSPP) acc. to ISO 228/1, Outlet: female thread type G (BSPP) acc. to ISO 228/1

Part No. 06388.X.2000

Inlet: male thread type R (BSPT) acc. to ISO 7/1, Outlet: female thread type G (BSPP) acc. to ISO 228/1

Part No. 06388.X.5000

Inlet: male thread NPT acc. to ANSI B 1.20.1, Outlet: female thread type G (BSPP) acc. to ISO 228/1

Part No. 06388.X.6000

Inlet: male thread NPT acc. to ANSI B 1.20.1, Outlet: female thread NPT acc. to ANSI B 1.20.1



Available options - on request only:

- external parts nickel plated
- with installed elbow at the outlet

Applications:

Provided as safety device for protection against excessive pressure in stationary and moveable gas cylinders.
Approved for air gases, vapours and cryogenic liquefied gases e.g. oxygen (O_2), nitrogen (N_2), argon (Ar),
hydrogen (H_2), helium (He), carbon dioxide (CO_2), carbon monoxide (CO), methane (CH_4), ethane (C_2H_6),
ethylene (C_2H_4), incl. LPG und LNG.

Working temperature: -196°C / -321°F (77K) up to $+185^\circ\text{C}$ / $+365^\circ\text{F}$ (458K)

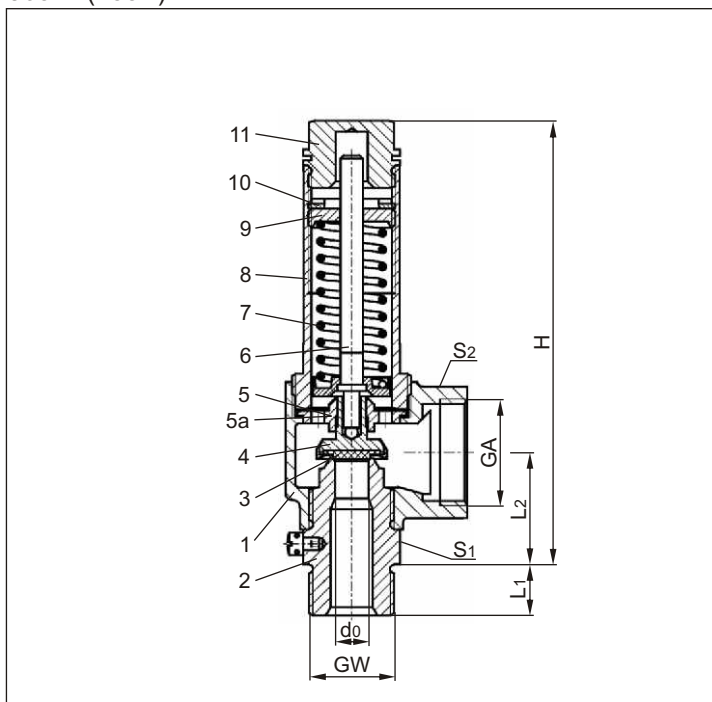
Materials	DIN EN	ASME / ASTM
1 Outlet body	CC491K	SB 62 UNS C83600
2 Inlet body	1.4301	SA-479.304
3 Valve seal	PTFE / Elektrocarbon (25%)	
4 Disc	CC493K	SB 505 UNS C93200
5 Guide plate	CC493K	SB 505 UNS C93200
5a Guide plate from GW 1	CW453K	SB 103 UNS C52100
6 Stem	CW453K	SB 103 UNS C52100
7 Spring	1.4571	SA-479.316
8 Bonnet	1.4308	A 351 CF 8
9 Spring clamt	CW614N	EN 12164 R400
10 Thread ring	CW614N	EN 12164 R400
11 Cap	CW614N	EN 12164 R400

Essential: Valves are delivered at a set pressure,
therefore when ordering please confirm set
pressure, medium and temperature.

Standard marking acc. to Pressure Equipment
Directive 97/23/EC (PED) and ASME Code
Section VIII.



Marking acc. to Directive 99/36/EG (TPED) will only
be carried out by written notice on purchase order.



Type 06388	Technical data							
Nominal size	GW	1/2	3/4	1/2	3/4	1	1-1/4	1-1/2
Orifice	d_0	7.0	7.0	10.5	10.5	15.0	23.0	23.0
Dimension code	.X.	0704	0706	1004	1006	1510	2312	2314
Set pressure range	bar	3.3-50.0	3.3-50.0	2.9-50.0	2.9-50.0	2.9-50.0	2.0-50.0	2.0-50.0
Outlet	GA	1	1	1	1	1-1/4	2	2
Height	H	140	140	140	140	157	218	218
Length	L_1	14	16	14	16	18	20	20
Length	L_2	36	36	36	36	42	56	56
Wrench size across flats	S_1	30	30	30	30	41	55	55
Wrench size across flats	S_2	41	41	41	41	50	70	70
Weight	ca. kg	0.78	0.80	0.76	0.79	1.27	3.05	3.10
Coefficient of discharge	α_w	0.82	0.82	0.58	0.58	0.5	0.62	0.62

Dimensions in mm.

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Discharge capacities

Medium:

Air in m³/h at 0°C and 1013.25 mbar

Air in SCFM at 0°C and 1013.25 mbar

The capacity indicated below is for a fully opened valve.

d₀ - orifice

A₀ - flow area

Calculation of discharge capacity acc. to AD2000-Merkblatt A2 / DIN EN ISO 4126-1 resp. ASME Code Sec. VIII.
The Safety Valve is marked with the lower capacity of both calculations.

Set pressure in bar (ü)	GW	1/2	3/4	1/2	3/4	1	1-1/4	1-1/2	Set pressure in psig	GW	1/2	3/4	1/2	3/4	1	1-1/4	1-1/2
	d ₀ (mm)	7.0		10.5		15.0		23.0		d ₀ (inch)	0.276		0.414		0.591		0.907
	A ₀ (mm ²)	38.48		86.6		176.63		415.27		rated slope	0.862		1.517		2.769		7.55
	Medium	Air in m³/h								Medium	Air in SCFM						
2.0		-		-		-		564	50		60		102		180		524
2.9		-		144		253		737	60		70		118		208		607
3.0		-		148		260		757	70		79		134		236		690
3.3		94		159		279		815	80		89		150		265		772
4.0		109		185		326		950	90		98		167		294		855
5.0		132		223		392		1143	100		107		183		322		938
6.0		153		260		458		1336	110		117		199		350		1021
7.0		176		298		524		1529	120		126		215		379		1104
8.0		197		336		590		1721	130		136		231		407		1187
9.0		220		373		657		1914	140		145		248		435		1269
10.0		241		411		723		2107	150		155		264		464		1352
12.0		286		486		855		2493	175		179		304		535		1559
14.0		330		561		988		2879	200		202		345		606		1766
16.0		374		637		1120		3265	225		226		384		677		1973
18.0		418		712		1252		3651	250		250		425		748		2180
20.0		463		787		1385		4037	275		273		465		818		2386
22.0		507		862		1517		4423	300		297		506		889		2593
24.0		551		938		1650		4809	325		321		546		961		2800
26.0		595		1013		1782		5195	350		345		586		1032		3007
28.0		639		1088		1914		5581	375		368		627		1103		3214
30.0		684		1163		2047		5967	400		392		667		1174		3421
32.0		728		1239		2179		6353	425		416		707		1244		3628
34.0		772		1314		2311		6739	450		439		748		1315		3835
36.0		816		1389		2444		7125	475		463		788		1386		4042
38.0		860		1464		2576		7511	500		487		828		1457		4249
40.0		905		1540		2709		7897	525		510		869		1529		4456
42.0		949		1615		2841		8282	550		534		909		1600		4662
44.0		993		1690		2973		8668	575		558		950		1670		4869
46.0		1037		1765		3106		9054	625		605		1030		1812		5283
48.0		1082		1841		3238		9440	675		653		1111		1954		5697
50.0		1126		1916		3370		9826	725		700		1192		2096		6111